

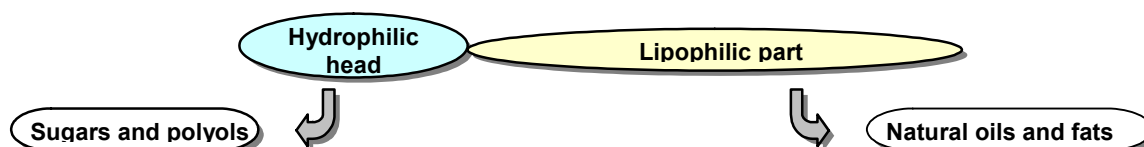
NEW SURFACTANTS FROM RENEWABLE RESOURCES

F. Goursaud, T. Benvegna, M. Roussel, C. Debaig, J. Guilbot, D. Plusquellec

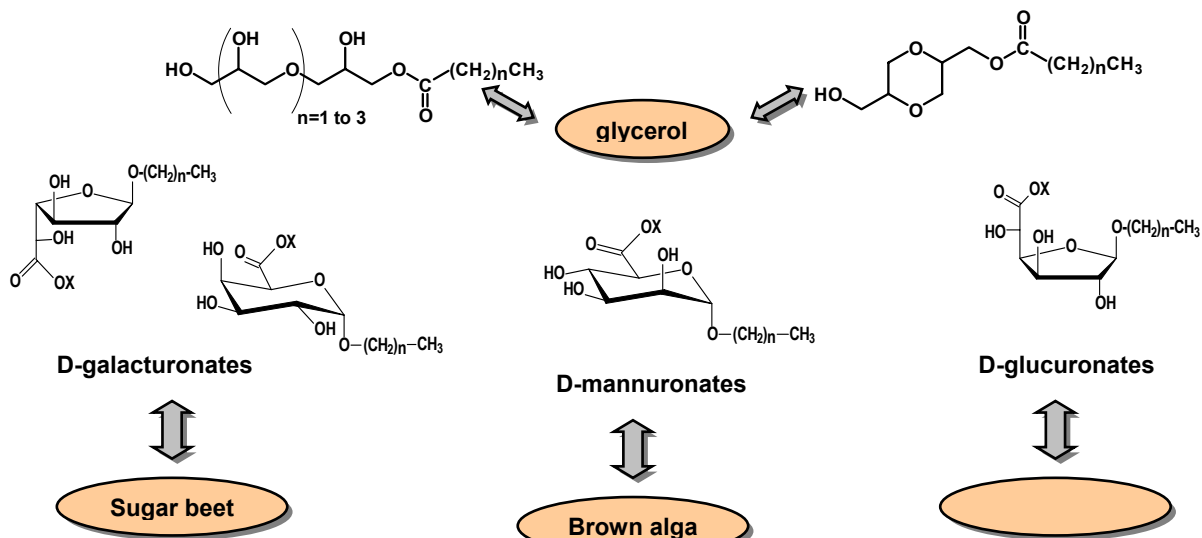
CNRS UMR 6052, « Synthèses et Activations de Biomolécules »

Ecole Nationale Supérieure de Chimie de Rennes, Campus de Beaulieu, 35700 Rennes

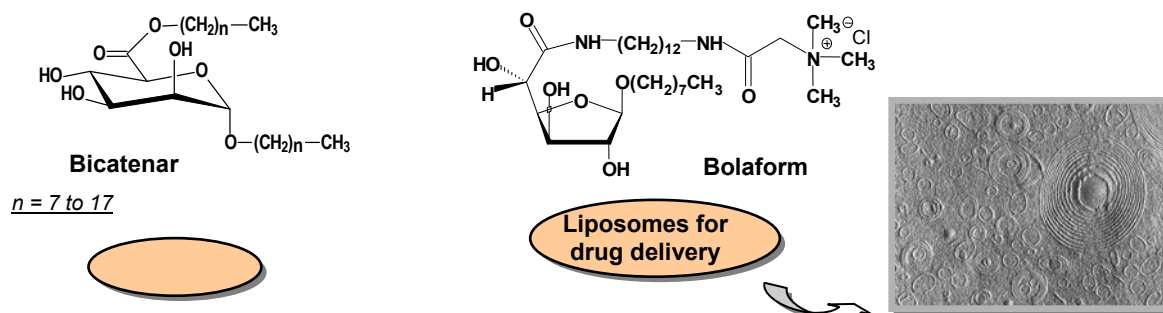
The development of surfactants based on natural renewable resources is a concept that gaining recognition from detergent and cosmetic industries. This new class of biocompatible and biodegradable surfactants should be a response to the increasing consumer demand for products that are both greener and more powerful. These amphiphilic molecules are derived from natural oils and fats (lipophilic moiety) and could incorporate sugar- and polyol-type residues as the polar headgroups.



Our strategy is based on high scale and environment-friendly process development and integrate rapid evaluation of tensid physico-chemical properties and formulation behaviour. Several series of new surfactants have been designed and allow the residual oleochemical product recovery and the valorisation of sugar, cereal and sea alga industry products^{1,2}. The connection between the different sectors makes possible completely natural molecules production that could substitute the petroleum derivatives mainly used.



Other original molecular structures like bolaform-type or bicatenar-type amphiphiles have been investigated. This high-value-added molecules could be employed in drug delivery or cosmetics³.



¹ Debaig C. and al., *Eur. J. Org. Chem.* **2001**, 875-896.

² Roussel M. ; Benvegna T. ; Plusquellec D. *Patent n° 02 06543* **2002**.

³ Guilbot J. ; Benvegna T. ; Legros N. ; Plusquellec D. ; Dedieu J.C. ; Gulik A., *Langmuir* **2001**, 17, 613-618.